AMENDMENTS TO THE SPECIFICATION

Replace first full paragraph of page 4, with:

Meanwhile, the spreading code generating units A 66-1 to 66-m multiply the long code,

peculiar to the base station, which has been determined by the threshold value evaluating unit 65

by the short code to generate m kinds of spreading code. The known base station delay-profile

generating units 67-1 to 67-m determines correlation values of n chip periods including the long

code from the m kinds of spreading code generated by the spreading code generating units A 66-

1 to 66-m and the spread modulation signal to generate and store a delay ~~profiles~~ profile for m

base stations from which signals are received.

Replace paragraph spanning pages 4-5 with:

The fundamental path detecting unit 68 detects the correlation peak phases of the P

correlation values from the maximum ~~from the~~ delay profiles for the m base stations. The

spreading code generating units B 70-1 to 70-k multiply the long code peculiar to the base station

which has been determined by the threshold value evaluating unit 65 by the short code to

generate k kinds of spreading code. The demodulation correlating units 69-1 to 69-k calculate

and generate k correlation outputs between the P correlation peak phases from the fundamental

path detecting unit 68 and the spreading modulation siganl, by use of the k kinds of spreading

code outputted from the spreading code generating units B 70-1 to 70-k, respectively. The

RAKE synthesizing unit 71 synthesizes the k correlation ouputs outputted from the demodulation

correlating units 69-1 to 69-k to generate a demodulation signal of a digital signal. The

demodulation signal is used to reproduce digital data bits in a rear stage circuit, which is not

shown in the drawing.

Replace paragraph spanning pages 6-7 with:

In conjunction with the above description, a CDMA communication system is disclosed in Japanese Laid Open Patent Application (JP-A-Heisei 10-126378). In this reference, a base station (2) spreads and modulates a data signal using a long code and a short code. A transmitting section (13) transmits a spread modulation data signal in which the data signal is spread and modulated by only the short code for every predetermined position of the long code. A mobile station (1) receives the spread modulation data signal known base stations. In this case, even if an by a receiving section (4). A short code identifying section (7) of a control processing section (6) carries out an identifying process of the short code. A long code identifying section (8) carries out an identifying process of the long code based on the short code identifying process timing. Reception levels (correlation values) in a group for same timing of the long code are stored in a reception level table (10). A received spread modulation data signal is subjected to an a despreading and demodulating operation using a long code with a maximum reception level.

Replace first full paragraph of page 8, with:

Also, a DS-CDMA communication receiver is disclosed in Japanese Laid Open Patent Application (JP-A-Heisei 10-200447). In this reference, a baseband reception signal is supplied to a matched filter (1) to calculate a correlation with a spreading code from a spreading code generating unit (2). A signal power calculating section (3) calculates power of correlation values outputted from the matched filter (1) to output a long code synchronization timing determining section (4), a threshold value calculating section (5), and a long code identifying section (6). A spreading code generating section (2) short code #0 common to control channels of the base stations in an initial cell searching operation. After a long code synchronization timing is

determined, each piece of an N chip as a part of a spreading code sequence as a synthesis code of

a long code #i peculiar to the base station and a short code #0 is outputted while being replaced.

Replace paragraph spanning pages 15-16 with:

Also, the outputting of selected long code phase candidates may be attained by detecting

and holding as long code phase candidates, peak phases corresponding to the first correlation

values for a second predetermined number from a maximum one of the first correlation values

and higher than a second predetermined threshold value, by generating spreading codes from the

short code and the determined long codes, respectively, by generating delay profiles for the

known base stations based on the generated spreading codes, respectively, by removing long

code phase candidates corresponding to peak phases for the generated delay profiles from the

held long code phase candidates, and by outputting the remaining long code phase candidates as

the selected long code phase candidates to the long code determining section.

Replace paragraph spanning pages 16-17 with:

Also, the outputting of selected long code phase candidates may be attained by generating

spreading codes from the short code and the determined long codes, respectively, by generating

delay profiles for the known base stations based on the generated spreading codes, respectively,

by detecting ones higher than a third predetermined threshold value from among third correlation

values calculated from the generated delay profiles and stores peak phases corresponding to the

detected third correlation value in the peak phase storage memory, by comparing a second

predetermined threshold value and each of the first correlation values, by detecting peak phases

corresponding to ones for a second predetermined number from a maximum one of the first

correlation values larger than the second predetermined threshold value, by comparing each of

the detected peak phases and the stored peak phases in the peak phase storage memory to remove

the stored peak phases from the detected peak phases, and by outputting remaining peak phases

as the selected long code phase candidates to the long code determining section. In this case, the

stored peak phases may be outputted for the known base stations.

Replace paragraph spanning pages 17-18 with:

Also, the outputting of selected long code phase candidates may be attained by storing

the first correlation values in a correlation value storage memory, by generating spreading codes

from the short code and the determined long codes, respectively, by generating delay profiles for

the known base stations based on the generated spreading codes, respectively, by detecting ones

higher than a third predetermined threshold value from among third correlation values calculated

from the generated delay profiles, by storing peak phases corresponding to the detected third

correlation values, by setting ones corresponding to the stored peak phases of the first correlation

values stored in the correlation value storage memory to lower values than a second

.predetermined threshold value, by comparing the second predetermined threshold value and each

of the first correlation values stored in the correlation value storage memory, and by outputting

peak phases corresponding to ones for a second predetermined number from a maximum one of

the first correlation values larger than the second predetermined threshold value as the selected

long code phase candidates to the long code determining section. In this case, the stored peak

phases may be outputted for the known base stations.

Replace seventh full paragraph of page 18, with:

Fig. 7 is a diagram showing an example of ~~algorism~~ algorithm of the known base station

delay profile generating unit in the first embodiment;

Replace first full paragraph of page 26, with:

Next, referring to Fig. 4~~3~~, an example of the process carried out by the maximum correlation peak phase detecting unit 3 will be described.

Replace paragraph spanning pages 27-28 with:

In the period of n chips including the long code phase LB(i) of a known base station BS(i), correlation values are calculated and stored in the memory. It is supposed that a delay profile generation range is set as the period of a ~~chips~~ chip before the long code phase 0 (= LB(i)) and as the period of b chips thereafter (n - a + (b+1)). Also, it is supposed that the correlation values are calculated for every one-chip period. In this case, a correlation value at a phase (LB(i) - a) is stored in the memory address number 0, and a correlation value at a phase (LB(i) + b) is stored in the memory address number (n - 1). In addition, the correlation value in the phase LB(i) is stored in the memory address number a. In this case, a delay profile storage memory has a memory capacity of M x n in accordance with the maximum number k of receivable base stations, and the delay profiles for m currently known base stations are generated.

Replace first full paragraph of page 28, with:

Next, referring to Fig. 7~~6~~, a description will be 5 given of the example of algorism of the known base station phase detecting unit 10.

Replace paragraph spanning pages 39-40 with:

In Fig.~~15~~ 11, the known base station correlation peak phase detecting units 31-1 to 31-m detect the phases of correlation peaks greater than a predetermined threshold from delay profiles DP1 to DPm of the known base stations generated by the known base station delay profile generating units 23-1 to 23-m. 25 The known base station correlation peak phase storage

memory 18 stores the phases of the correlation peaks greater than the predetermined threshold.

The maximum correlation peak phase detecting unit 19 detects top Q correlation values as the

outputs of the correlating unit A 21 to obtain the correlation peak phases (long code phase

candidates). In this case, when the obtained correlation peak phases are compared with the

known base station correlation peak phases stored in the known base station correlation peak

phase storage memory 18. When the obtained correlation phases are identified as known base

station correlation peak phases, the obtained phases are not stored as correlation peak phase

candidates. Furthermore, the maximum correlation peak phase detecting unit 19 has a function to

carry out threshold evaluation of the correlation values as the outputs of the correlating unit A 21.

With this function, it is possible to avoid that correlation peak phases having small correlation

values likely to be identified as noises are stored as the long code phase candidates. As a result, a

high-speed peripheral cell searching operation can be achieved.

Replace second full paragraph of page 41, with:

Now, it is supposed that J known base station correlation peak phases from the delay

profiles DP1 to DPm are stored in the known base station correlation peak phase storage memory

18. In this case, it is supposed that the correlating unit A 21 acquires a correlation value LPN at

the phase LMN. When the The correlation value LPN is compared with a predetermined

threshold (step M101). When the value LPN is found to be less than the threshold, the phase

corresponding to the correlation value LPN is determined not to be a correlation peak phase.

Replace paragraph spanning pages 41-42 with:

When the correlation value LPN is found to be equal to or greater than the threshold, the

correlation value LMN is compared with the phases stored in the known base station correlation

peak phase storage memory 18 (step M102 to step M105). When the known base station

correlation peak phase LB(i) is compared with the phase LMN, it is determined whether or not

the phase LMN exists in a phase interval of the known base station correlation peak phase LB(i)

and before and after the known base station correlation peak phase LB(i) by C chip periods in

consideration of-that a peak exists to have a predetermined width (step M103). When the phase

LMN exists in the C chip periods, the phase LMN is identified as a known base station

correlation peak phase.

Replace second full paragraph of page 49, with:

Next, the operation of the CDMA baseband receiver shown in Fig. 16 will be described

with reference to the flowcharts shown in Figs. 17A and 17B. In this case, the processing

procedure up to the initial base station synchronization establishing process is the same as that of

the first embodiment, which are shown in Figs. 8A and 8B. Thus, the description of the

processing procedure will be not-omitted. In Figs. 17A and 17B, and only the operation of the

.receiver at the time of a peripheral cell searching operation conducted when synchronization

with one or more base stations is established will be described.

Replace paragraph spanning pages 51-52 with:

As described above, the detailed description of each of the embodiments of the present

invention has been provided with reference to the drawings. However, the specific structure of

the invention is not limited to these embodiments, and various modifications and changes in

design may be made without departing from the scope of the present invention. For example, as

shown in the second embodiment, the process carried out by the maximum correlation peak

phase detecting unit 19, in which the correlation peak phases of small correlation values are

regarded as noises and not determined as long code phase candidates, may be applied to one of

the first and fourth embodiments. In this case, the process amount of carried out at the time of

threshold evaluation can be reduced, thereby leading to a high-speed peripheral cell searching

operation.